PHENIX Run16 status
time meeting 02/23/2016

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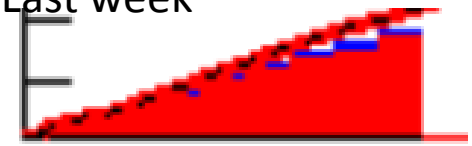
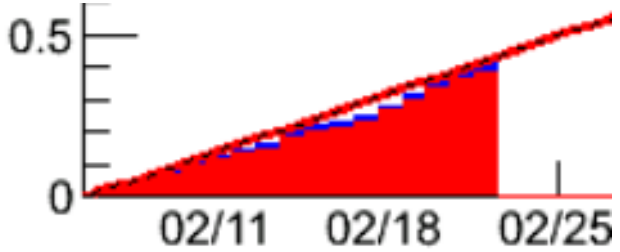
Calendar

- Watch shifts started 12 January
- Detector closed 29 January
- timing with collisions started 5 february,
- Recording physics run since 6 february midnight Efficiency improving. Still 10% to gain in data flow.
- Maintenance day: drift chamber (noise), VTXSP..
- AuAu: goal >7KHz “narrowvertex” at end of store
- End of 10 weeks AuAu **to be precised**
- Then **5 weeks** d-Au,
- (then CeC)

Last week

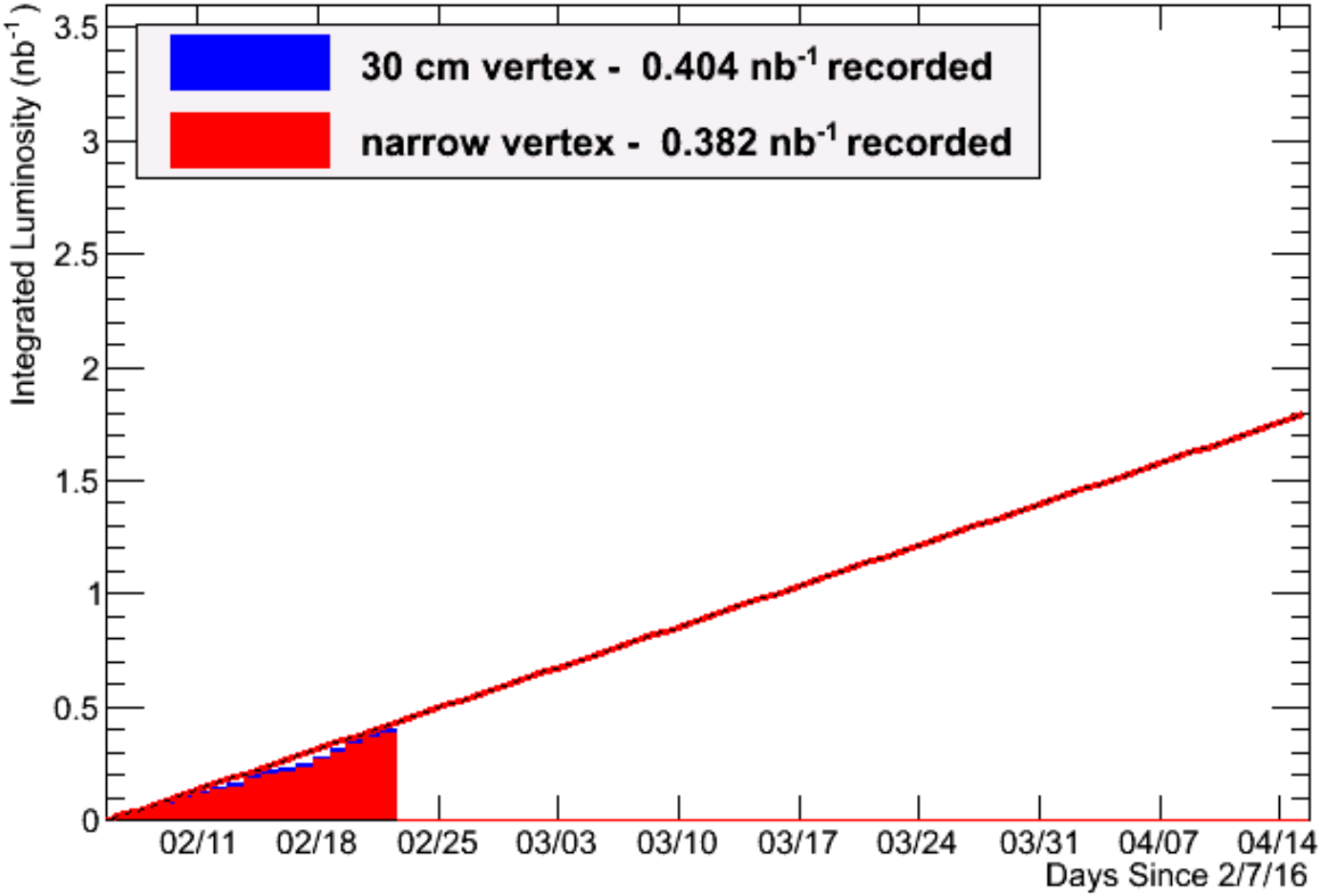


luminosity

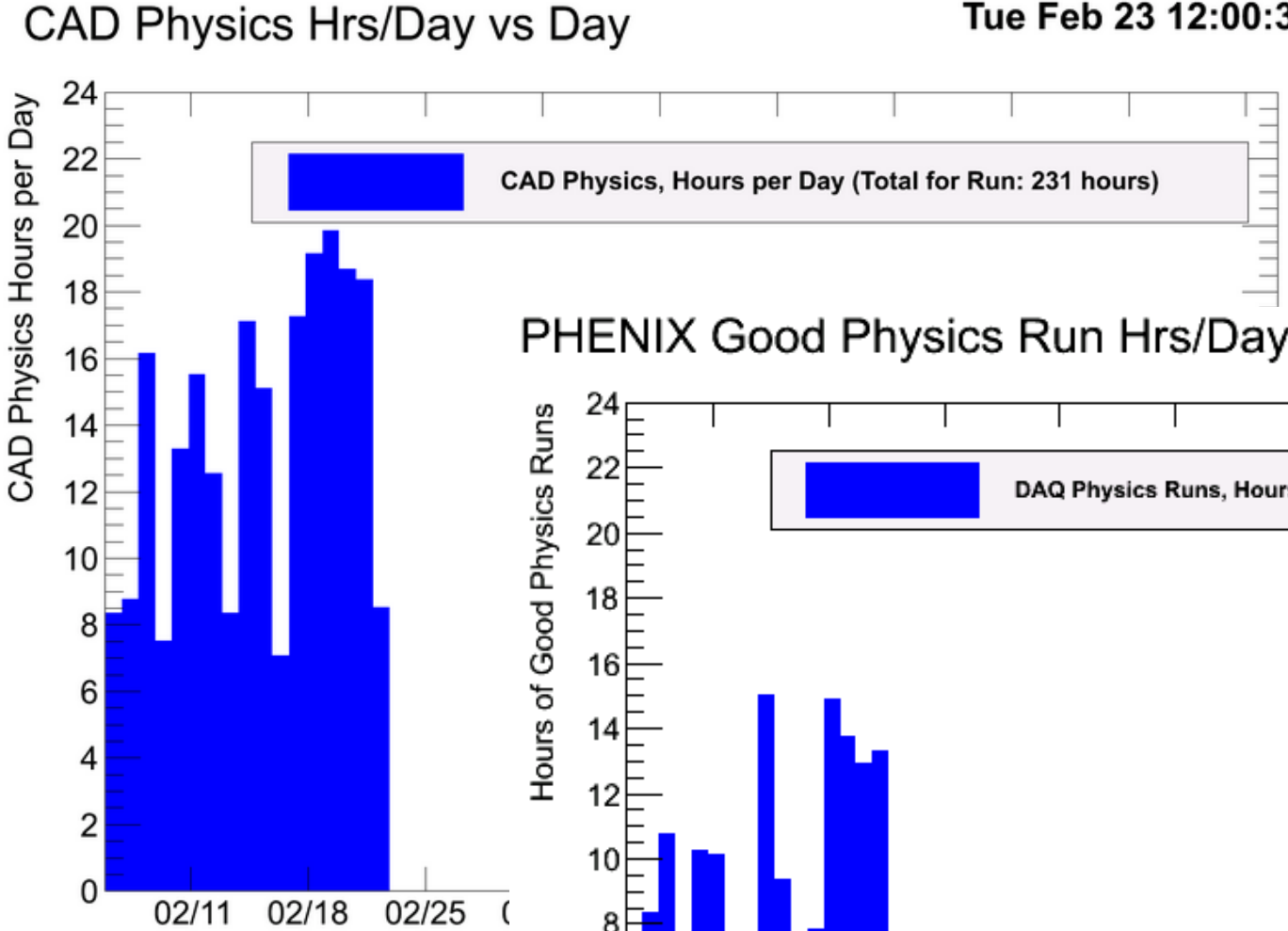


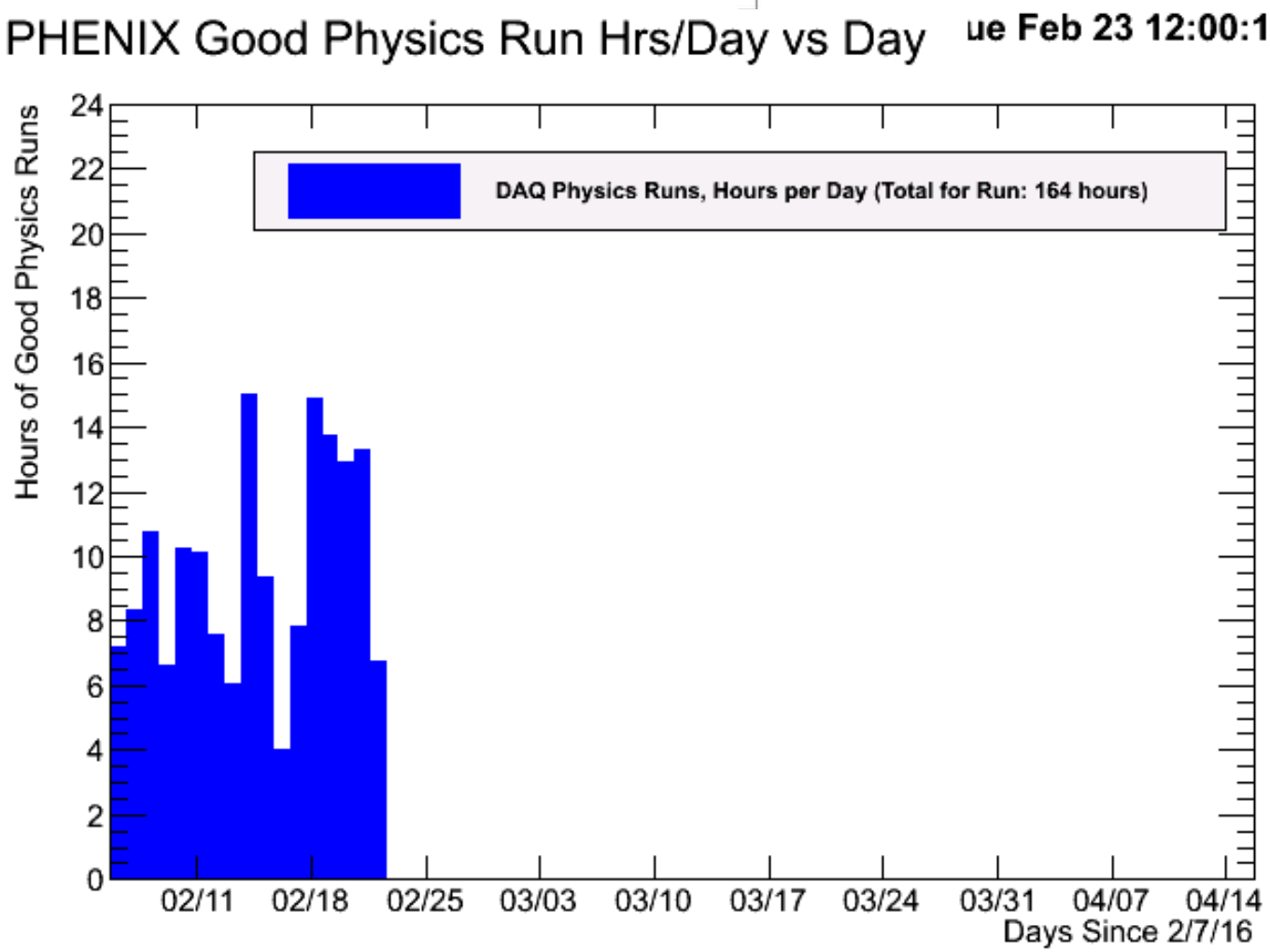
PHENIX Integr. Sampled Lumi vs Day

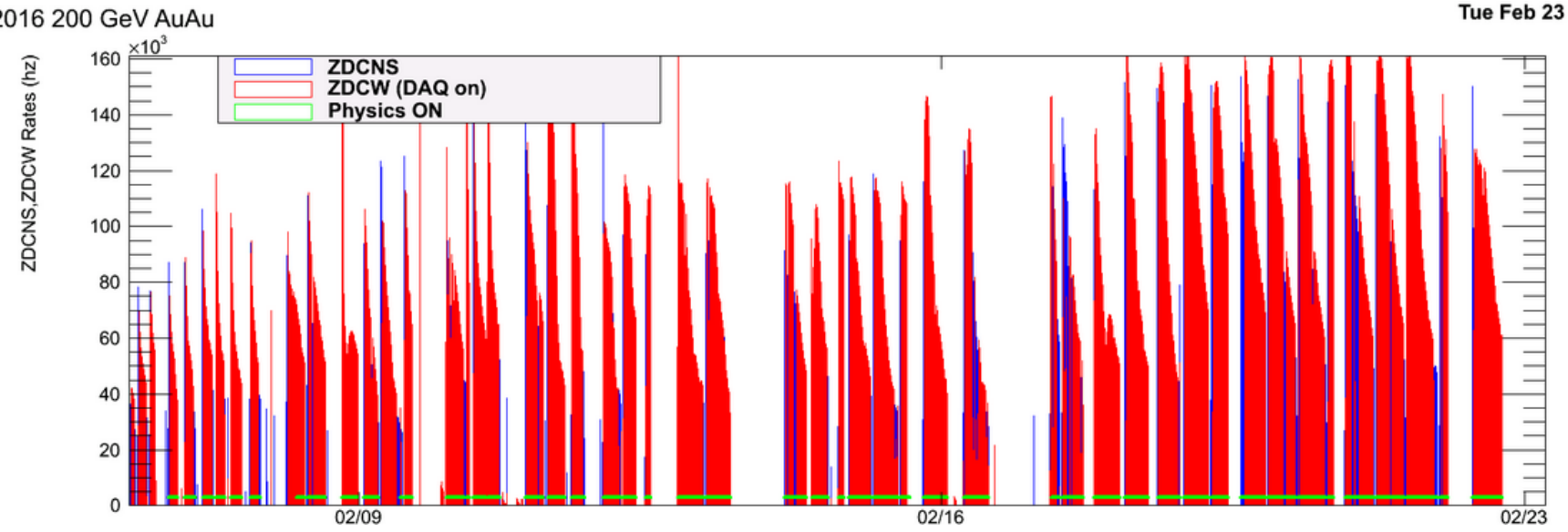
Tue Feb 23 09:00:18

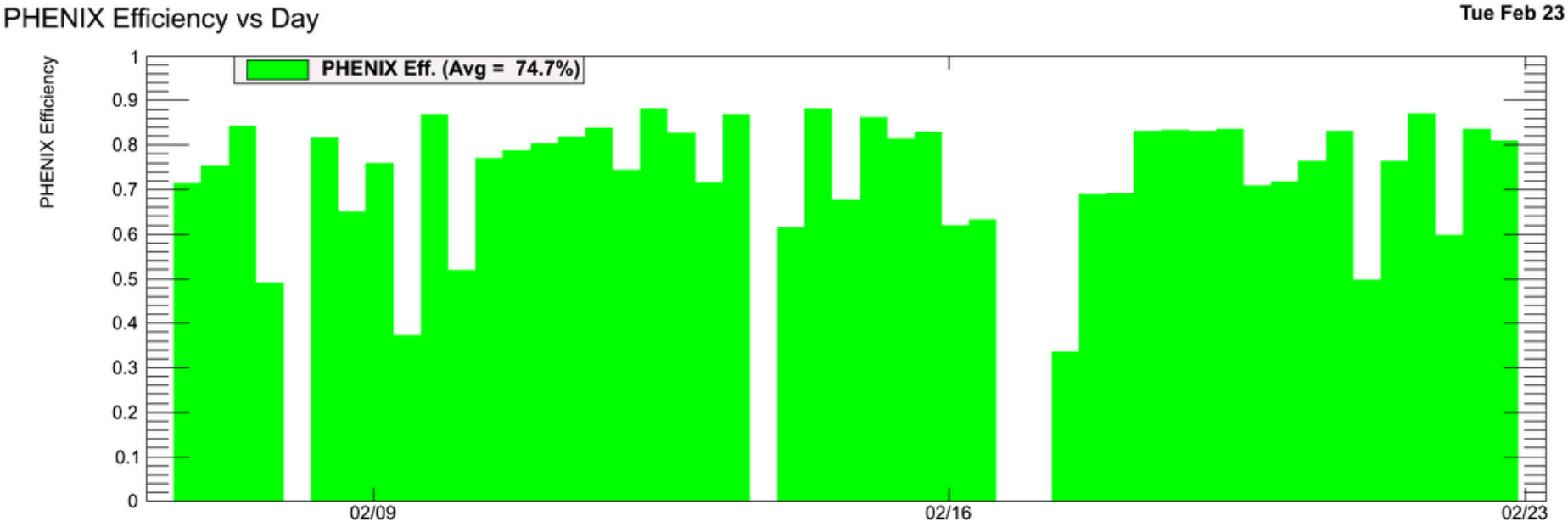


Actual recorded number in agreement with BUP goal 1.8nb-1 « narrow vertex »

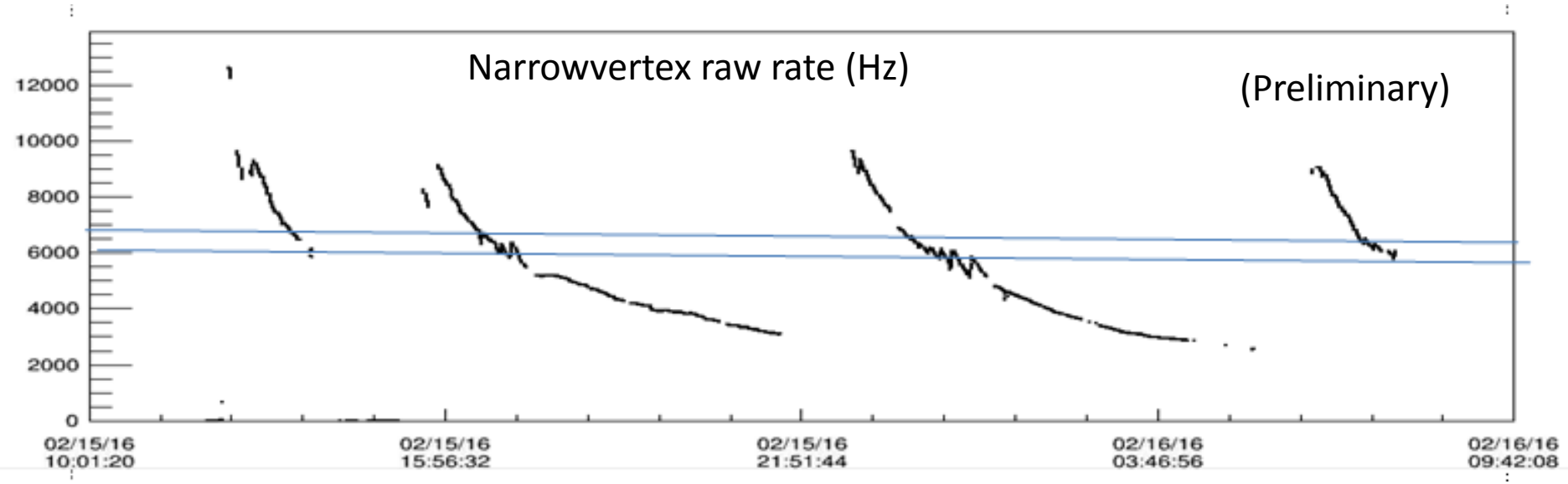

CAD Physics Hrs/Day vs Day
Tue Feb 23 12:00:32
CAD Physics, Hours per Day (Total for Run: 231 hours)
CAD Physics Hours per Day
0
2
4
6
8
10
12
14
16
18
20
22
24
02/11
02/18
02/25


PHENIX Good Physics Run Hrs/Day vs Day
ue Feb 23 12:00:1
DAQ Physics Runs, Hours per Day (Total for Run: 164 hours)
Hours of Good Physics Runs
0
2
4
6
8
10
12
14
16
18
20
22
24
02/11
02/18
02/25
03/03
03/10
03/17
03/24
03/31
04/07
04/14
Days Since 2/7/16

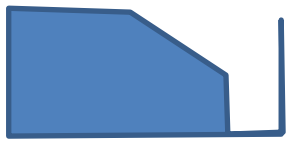

2016 200 GeV AuAu
Tue Feb 23 12:00:
ZDCNS,ZDCW Rates (hz)
×10^3
160
140
120
100
80
60
40
20
0
ZDCNS
ZDCW (DAQ on)
Physics ON
02/09
02/16
02/23


PHENIX Efficiency vs Day
Tue Feb 23 12:00
PHENIX Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
PHENIX Eff. (Avg = 74.7%)
02/09
02/16
02/23

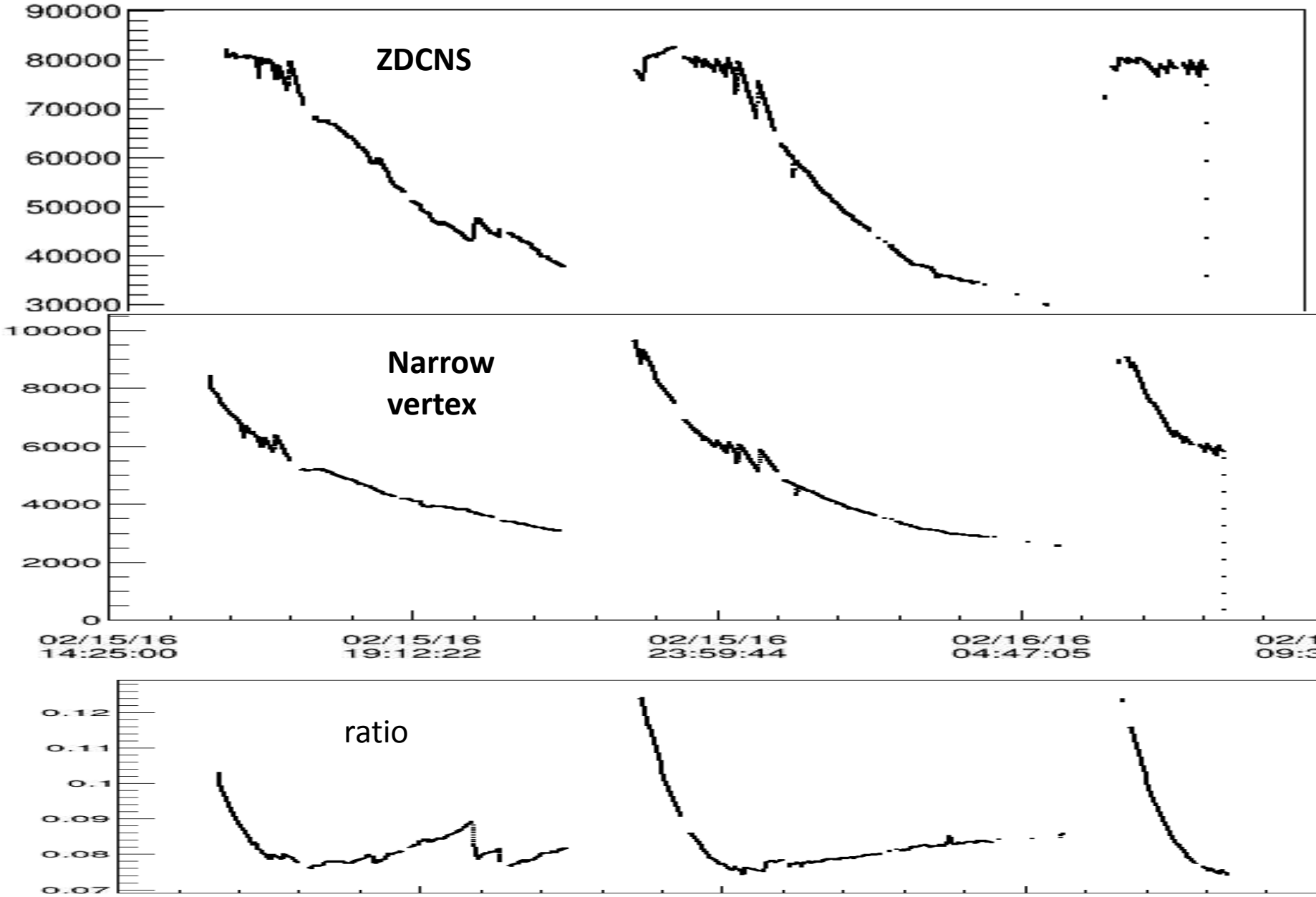
10% remain to gain on our daq flow but we could already take more luminosity at end of store

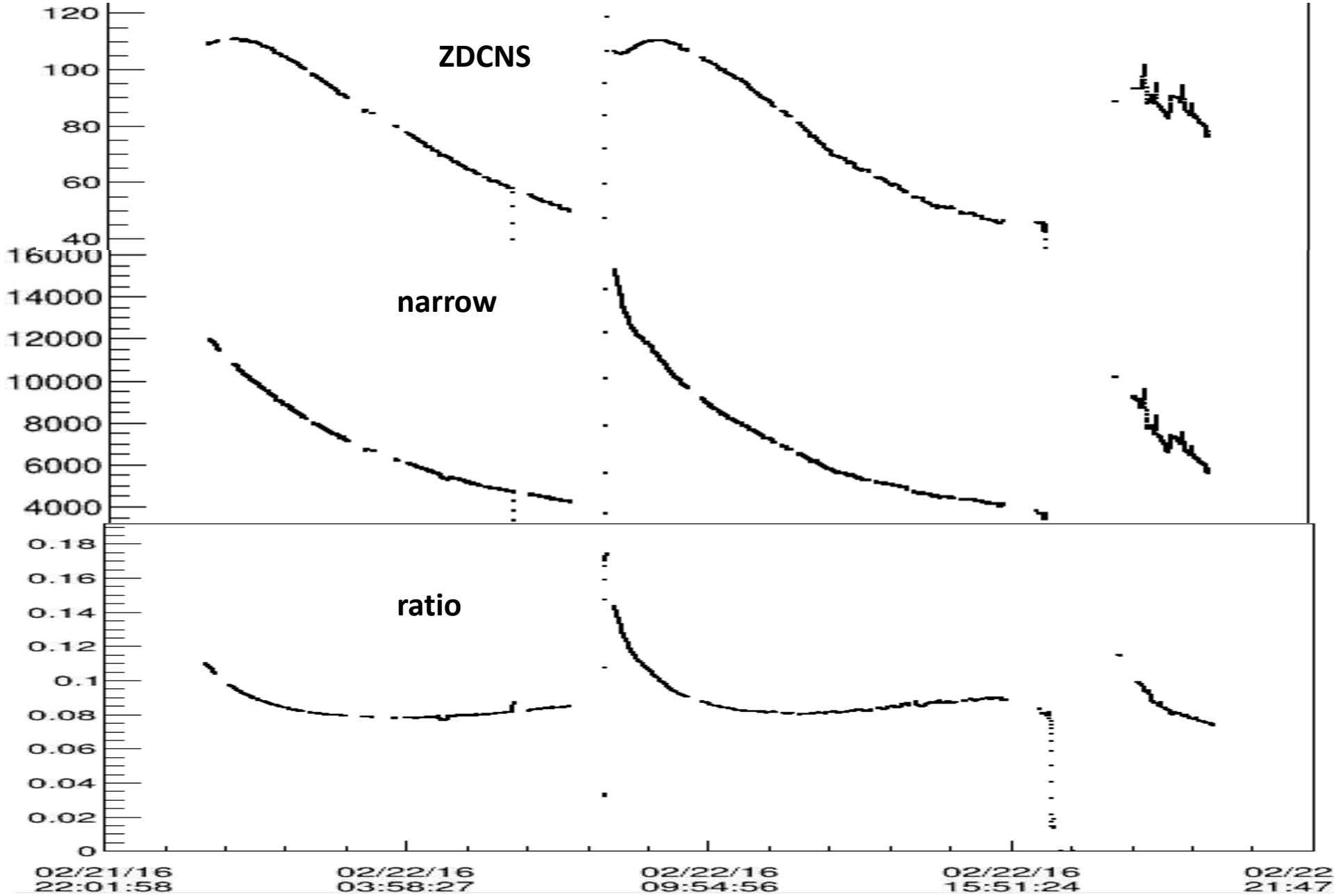


(shown last week)



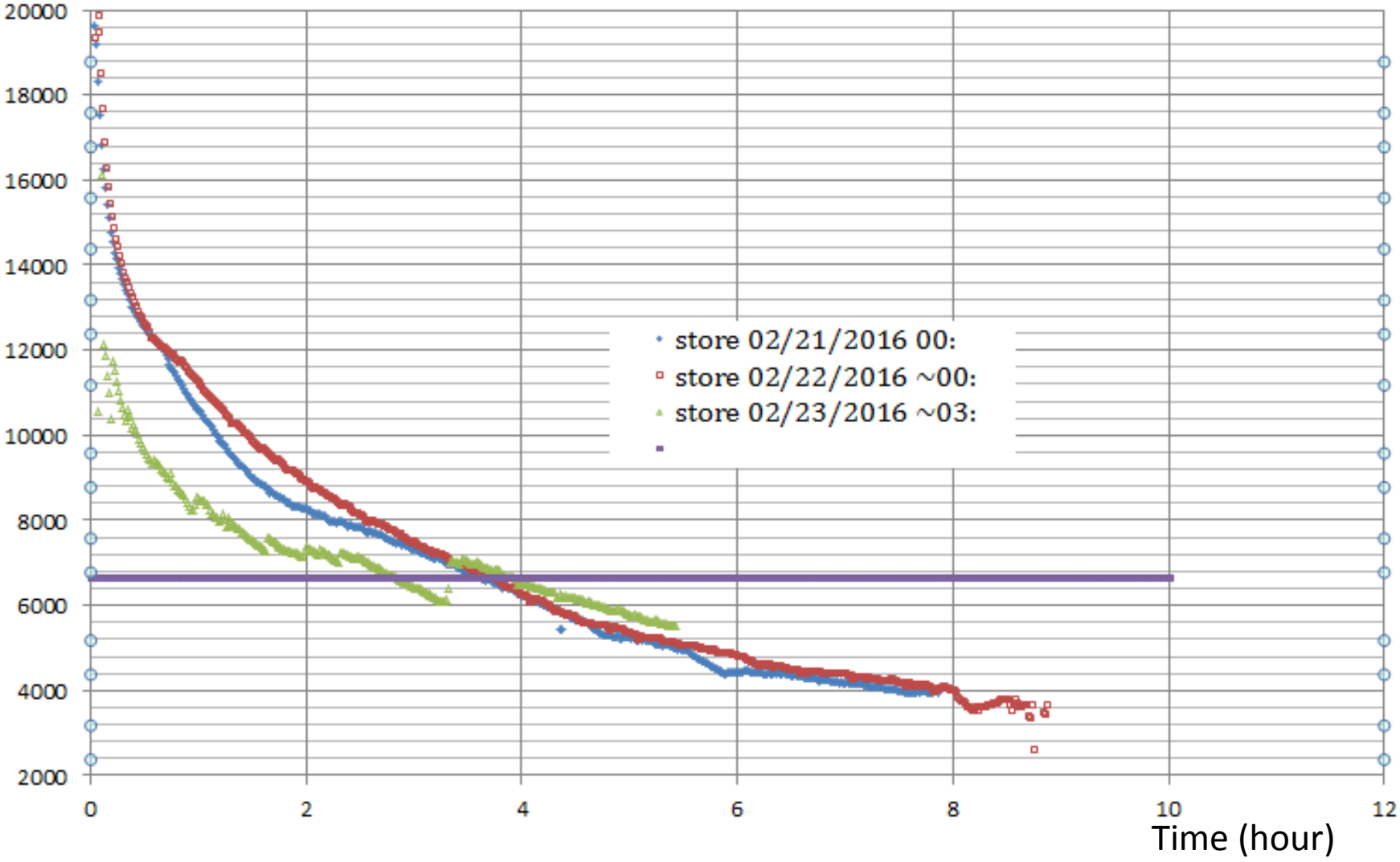
Narrow and all vertexes are not proportionals




ZDCNS
narrow
ratio
120
100
80
60
40
16000
14000
12000
10000
8000
6000
4000
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
02/21/16 22:01:58
02/22/16 03:58:27
02/22/16 09:54:56
02/22/16 15:51:24
02/22 21:47

Lenght of store

« Raw Narrow vertex » (Hz)



Summary

- Taking data
- Efficiencies improving , 85% uptime achievable
- Integrated luminosity rate already close to the BUP goal…
  - Good at this early stage ！
- Could accept more luminosity at the end of store.

Backup

D-Au BES: some extracts from the PAC June 2015:

In "2.2 Discussion of run 16 priorities:"

"2.2.2 Five to seven weeks of running to perform a small system beam energy scan: »

- ….« These measurements capitalize on the **unique and impressive versatility of the RHIC accelerator in providing a variety of collisions systems and energies."**
- … "**One of the hottest topics** in heavy ion physics in the past few years is the observed similarity between the behavior of many observables for p+p, p+A, d+A, 3He+A, and A+A, which poses the fundamental question of how small a system can exhibit thermalized QCD behavior. What is the smallest possible droplet of QGP, and how does the answer to this question depend on the collision energy and event multiplicity, which is to say on the temperature of the QGP in question? Addressing this newly opened, and challenging, question promises to deepen our understanding of, for example, which requirements have to be fulfilled for hydrodynamics to be applicable. »